Comments received From: Turner, Philip [mailto:Turner.Philip@epa.gov]
Sent: Thursday, February 18, 2016 5:08 PM
To: Forsythe, Barry; Coltrain, Katrina
Cc: McMillan, Teresa; Radu, Cristina; Todd Downham
Subject: Re: CSM--ECO and HH

My two cents...

For Eco:

I agree with Barry's comments.

Inhalation should be complete, but not quantifiable/insignificant – **Response: It is unclear from the comment for which exposure media and for which receptors a change has to be made. The comment is similar to that made by Barry Forsythe. The media would be air and inhalation by terrestrial critters. I agree that this pathway is not quantifiable, but for the sake of transparency, a note may be in order to explain why it is listed as incomplete.**

Plants and sediment is a complete pathway, though probably insignificant – **Response: for sediment, we only have exposure through ingestion and direct/contact; does this comment indicate we should mark direct contact of plants to sediment as insignificant? Please clarify. Yes. Rooted plants are in contact with the sediment. Although I know this pathway is not quantifiable, it is complete. As above, perhaps at least a note should be included to explain this.**

The GW-SW pathway should be investigated, which would make eco pathways to GW "potentially" complete – **Response: the surface water to groundwater interaction is already marked on the HH CSM and will be investigated. When ground water daylights, it becomes surface water and surface water is already considered an exposure medium for the eco receptors. Please see general explanation on the approach for infiltrated water vs. ground water. I agree with the explanation given to the similar comment made by Barry Forsythe. I'm thinking about transparency. Some reviewers will not even look at the HH CSM. Those folks might wonder why it appears we're not looking at GW/SW interactions for eco. Perhaps at least a note should be included explaining that it is being investigated... as SW.**

The pathway for mammals and food chain is complete, but listed as insignificant. this is probably true since I doubt even many mammals are actually getting any food from the creek here. – **Response – comment noted.**

For HH:

I assume the lines from subsurface to soil to SW and sediment would be due to long-term erosion in some areas, like the drainages; **Response: the water ponding on top of the**

subsurface where refusal was encountered during drilling is not considered perched ground water; the arrows in the CSM indicate that there is a potential for contamination from subsurface soil to possibly migrate to surface water/sediment through seeps, the transient infiltrated water acting as a transport mechanism; this is one of the questions that the investigation will answer

Agree that constructions workers can be exposed to groundwater via ingestion and contact. They can also be exposed via inhalation, though not "indoor**".** **Please see response to Barry Forsythe's comment**

The trespasser can also be exposed to GW if they encounter a seep. This pathway is potentially complete, though probably insignificant – **Response: agreed that a trespasser may be ingesting water from a seep; however, a seep sample will be evaluated as surface water.**

The trespasser could also ingest wild foods, but probably insignificant – **Response: Because the HH CSM was so busy, insignificantly complete pathways have been identified as incomplete in the diagram. The data collection designed will not include additional sampling to evaluate these insignificant HH exposures. Please let us know if you require these insignificant pathways to be added or we can add a note specifying that for clarity, they are not depicted on the diagram. I think a clarifying note would be a good idea.**